

REMARKS

In accordance with the foregoing, claim 18 has been amended. Claims 1-16 and 21 have been withdrawn. Claims 1-21 are pending, and claims 17-20 are under consideration.

ITEM 2. CLAIMS 1-16 AND 21 ARE WITHDRAWN FROM CONSIDERATION PURSUANT TO 37 CFR 1.142(b), AS BEING DRAWN TO A NONELECTED SPECIES.

Applicants respectfully traverse the Examiners withdrawal of these claims from consideration under 37 CFR 1.142(b).

Claims 1-7 are drawn to the elected species of FIGs. 3-4F. The Office Action states that the recitation in claim 1, "more than 2 optical detectors positioned along a diagonal to a track center," does not read on the elected species of FIGs. 3-4F. However, optical elements A and C and B and D of the optical detection unit 302 are positioned in such a manner. As FIG. 5, which the Examiner states claims 1 and 2 are drawn to, uses a similarly configured optical detection unit 502, the applicants respectfully note that the language is generic to both species.

The optical signals A, B, C and D are illustrated in FIG. 3 as being binarized. Thus, each of the optical signals A, B, C and D are binarized as claimed in claims 1 and 2. There is no requirement that every element in a Figure be positively recited in a claim. Further indicating that these claims are drawn to the elected species, dependent claim 6 recites a "frequency divider" that is not depicted in FIG. 5, rather the frequency divider 318 is illustrated in FIG. 3.

It is respectfully requested that the Examiner consider claims 1-7 as drawn to the elected species, and that the Examiner remove the withdrawal requirement with respect to these claims and place them under consideration.

Claims 10, 13-16 and 21 read on the elected species of FIGs. 3-4F. The Office Action states that the matrix circuit 304 provides combined signals to be binarized. Applicants again note that no requirement exists to claim every element of a figure in the claims. As claim 10 recites first and second optical detectors using open ended claim language "comprising," there could be more optical detectors. FIG. 3 meets this recitation as the optical detection circuit 302 has "first and second optical detectors," any two optical element combination of A, B, C, or D; and "a circuit which binarizes" binarizer 308a and 308b the outputs. Again, FIG. 5 has a similar configuration of optical detection unit 502 that the Action states read on these claims. FIG. 3 also phase locks the binarized signals to output first and second clock signals (PLLs 310a and

301b).

It is respectfully requested that the Examiner consider claims 10, 13-16 and 21 as drawn to the elected species, and that the Examiner remove the withdrawal requirement with respect to these claims and place them under consideration.

ITEM 3. THE TITLE OF THE INVENTION IS NOT DESCRIPTIVE.

As claim 1 is drawn to a method and is believed to be drawn to the elected species applicants respectfully traverse the objection to the title.

ITEMS 4 AND 5. CLAIMS 18-20 ARE REJECTED UNDER 35 USC 112 FIRST PARAGRAPH AS FAILING TO COMPLY WITH THE ENABLEMENT REQUIREMENT.

As an initial matter, in order to establish a prima facie case for lack of enablement, the Examiner must demonstrate that one skilled in the art would not be able to make or use the claimed invention without undue experimentation. In order to make such a showing, the Examiner needs to account for the various factors outlined in MPEP 2164.01(a), which includes (A) the breadth of the claims; (B) the nature of the invention; (C) the state of the prior art; (D) the level of one of ordinary skill; (E) the level of predictability in the art; (F) the amount of direction provided by the inventor; (G) the existence of working examples; and (H) the quantity of experimentation needed to make or use the invention based on the content of the disclosure. Using all of these factors, the Examiner's analysis must consider the evidence related to each of these factors, and any conclusion of nonenablement must be based on the evidence as a whole and not on only one of the above factors. See MPEP 2164.01

In the Office Action, the Examiner has not provided a reasonable basis upon which to conclude that one skilled in the art would not be able to make or use the claimed invention without undue experimentation. There is no explanation as to why, assuming that the equalizers are critical or essential to the practice of the invention, one skilled in the art would be unable to make or use the invention claimed in claims 18-20, when the specification teaches the use of such equalizers to strengthen high frequency components and remove noise from the optical signals from the optical detector. FIG. 8 is a graph showing operation of the equalizers that "perform the function of controlling their properties so that an input signal can be positioned between a first frequency f_1 and a second frequency f_2 to amplify the high frequency component which is close to the second frequency f_2 ." Further, US Patent No. 5,914,925 issued to Lee et al. on June 22, 1999 labels several boxes in a schematic of the invention as "Equalizer & Comparator." As this patent is presumed valid it is submitted that prior to June 1999 one of

ordinary skill would be able to make and use such a disclosure without undue experimentation.

In view of the above it is respectfully submitted that sufficient evidence of a lack of enablement has not been provided so as to establish a prima facie case for lack of enablement. Therefore, it is respectfully submitted that claims 18-20 are deemed patentable and are in compliance with 35 USC 112, first paragraph.

ITEMS 6 AND 7. CLAIMS 17-20 HAVE BEEN REJECTED UNDER 35 USC 102(b) AS BEING ANTICIPATED BY JP 10-302277 ('277).

The Office Action equates 127, 161, and 163 of figures 1, and 13-14 to a "circuit which performs a phase lock operation." However, '277 discusses carrying out automatic adjustment of the phase contrast delay in the phase comparator using *a* PLCLK signal (emphasis added) to adjust the amount of phase delay. (see '277 electronic translation p. 11, paragraphs [0064] - [0066]). In contrast, claim 17 recites a circuit performing a phase lock operation on *each* signal to output clock *signals* synchronized with each respective signal, and a phase detector that compares the phases of the clock signals.

In view of the above, it is respectfully submitted that the rejection is overcome.

CONCLUSION.

There being no further outstanding objections or rejections, it is submitted that the application is in condition for allowance. An early action to that effect is courteously solicited.

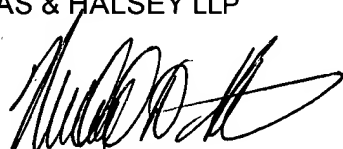
Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

STAAS & HALSEY LLP

Date: 3/9/04

By: 
Michael D. Stein
Registration No. 37,240

1201 New York Avenue, NW, Suite 700
Washington, D.C. 20005
Telephone: (202) 434-1500
Facsimile: (202) 434-1501